

Mini-proposal to create automated high frequency trading abuse detection system and risk management dashboard

The secret behind HFT abuses is they are not clear

On November 2, 2010, nearly one year before the MF Global collapse would scare the non-bank listed derivatives industry forever, CFTC Chair Gary Gensler was meeting in Chicago with an representative from the European Commission and derivatives exchange leaders to discuss transparency in market regulation.¹

It was nearly 6 months after the May 6, 2010 flash crash, in incident initially blamed on several issues, including a “fat finger” mistake by humans. At the center of the algorithmic crash, however, was a little-known aspect of the market making software colloquially known as an electronic eye that pulled bids and offers from the market. It was in this aftermath market practioners were hoping for clear regulations that were understood by all market participants equally.

What they got was something very different.

Today high frequency trading (HFT) abuses are unclear to many market participants because the regulations are unnecessarily complex.² This makes following the regulations as difficult to stay on the right side of the law as it does for prosecutors enforcing the issue.

This brief mini-proposal seeks to offer suggestions to implement clearly understood market regulations and at the same time provide an algorithmic method and software system to police for market abuses and provide regulators a solid and consistent framework for reviewing potential cases.

Proposal elevator pitch

This proposal seeks to automate the process of identifying and prosecuting market abuses by creating an automated algorithmic detection method that will have as a feature identifying certain market abuses in real time before they hit the market.

This system would leverage information provided to the Commodity Futures Trading Commission (CFTC) by exchanges that specifically denotes a trader’s identity.

The system would leverage known and proven technology components from existing HFT algorithms to integrate them into a system that has closed loop characteristics regulated by feedback where the input and output are related. The methodology breaks down the complexity of algorithms into a core performance driver analysis system that recognizes the impact of beta market environments on market direction.

The proposal includes three primary deliverables:

¹ <https://www.cftc.gov/PressRoom/PressReleases/pr5931-10>

² This is a charge that has been leveled in court by those accused of HFT abuses and is a common problem listed by many HFT practioners. I have had numerous conversations with lawyers in this regard.

- 1) A methodology to build a consensus among major market participants as to clearly define high frequency trading abuses. From this consultation and information analysis in a transparent environment, a recommendation is made to construct clear and easily understood definition for HFT market abuses.
- 2) Using largely known HFT technology and methods, a risk management dashboard plan will be created in coordination with major industry players, including FIA PTG, Tabb Group, Modern Markets, major derivatives exchanges and consumer / financial advocates. Wireframe prototypes and schemas will clearly outline how the software will operate.
- 3) The end product is a software product that identifies potential market abuses and then a potential add-on of former HFT investigators at the CFTC and FBI building a preliminary case for regulators. A risk management dashboard will allow for potential interdiction by national security officials if disruptive market behavior is believed to be state sponsored or coordinated.

Management team

The deliverables will be overseen by an “all-star” board of directors and management team that will include former CFTC, SEC, FBI, NFA, FINRA executives working alongside select former executives of proprietary trading firms, exchanges and other derivatives related professionals. The net result will be a reduction in HFT abuses and lowered cost of regulatory administration of these tasks.

What makes this proposal unique:

This proposal leverages existing technology from top providers and creates a clear consensus regarding rules.

The primary benefit is improved market security under a cost effective umbrella.

Further information on the process and methodology is available in a confidential format that protects intellectual property rights.